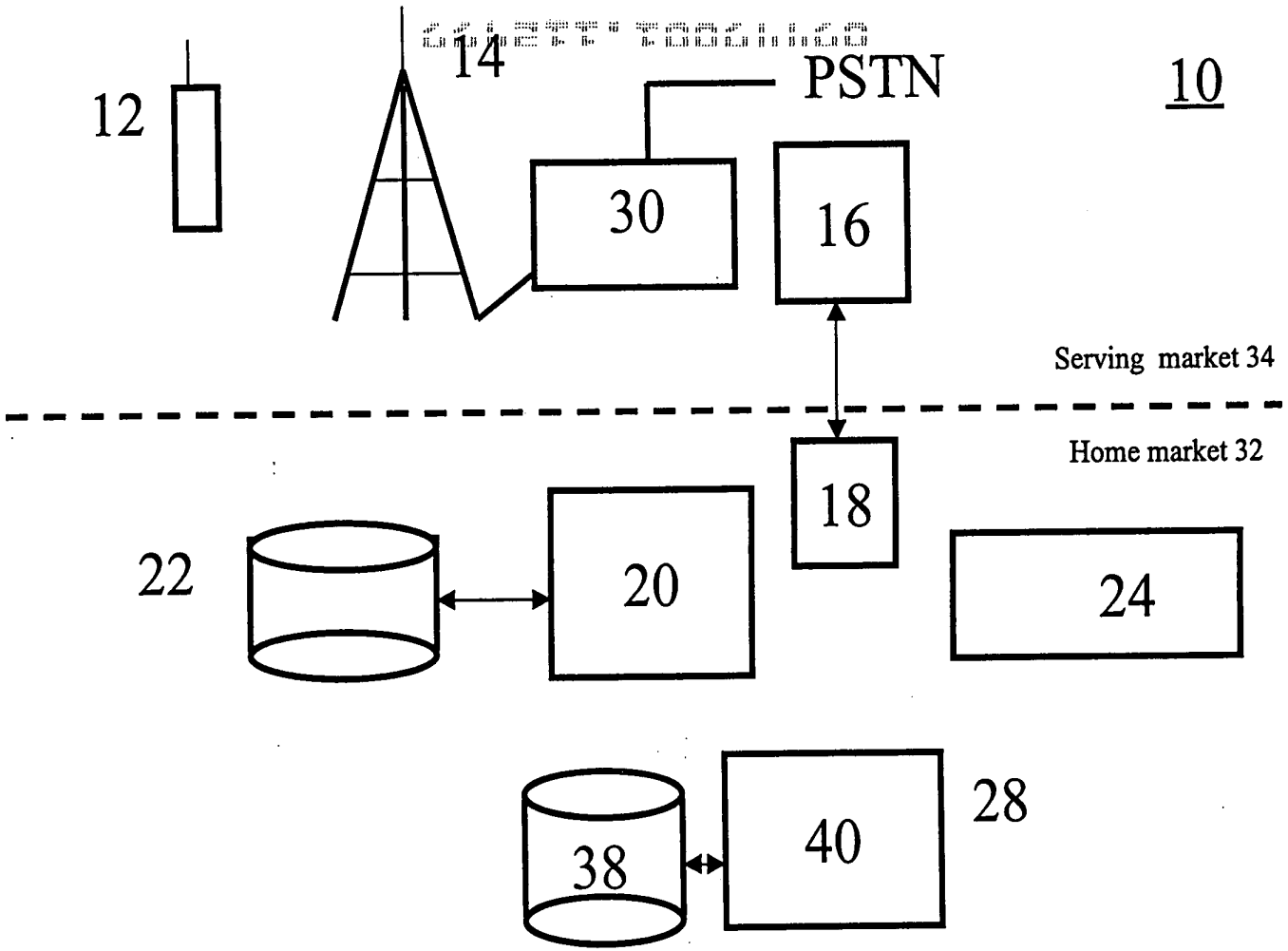

12
14
PSTN
10
30
16
Serving market 34
Home market 32
18
22
20
24
28
38
40

Fig. 1

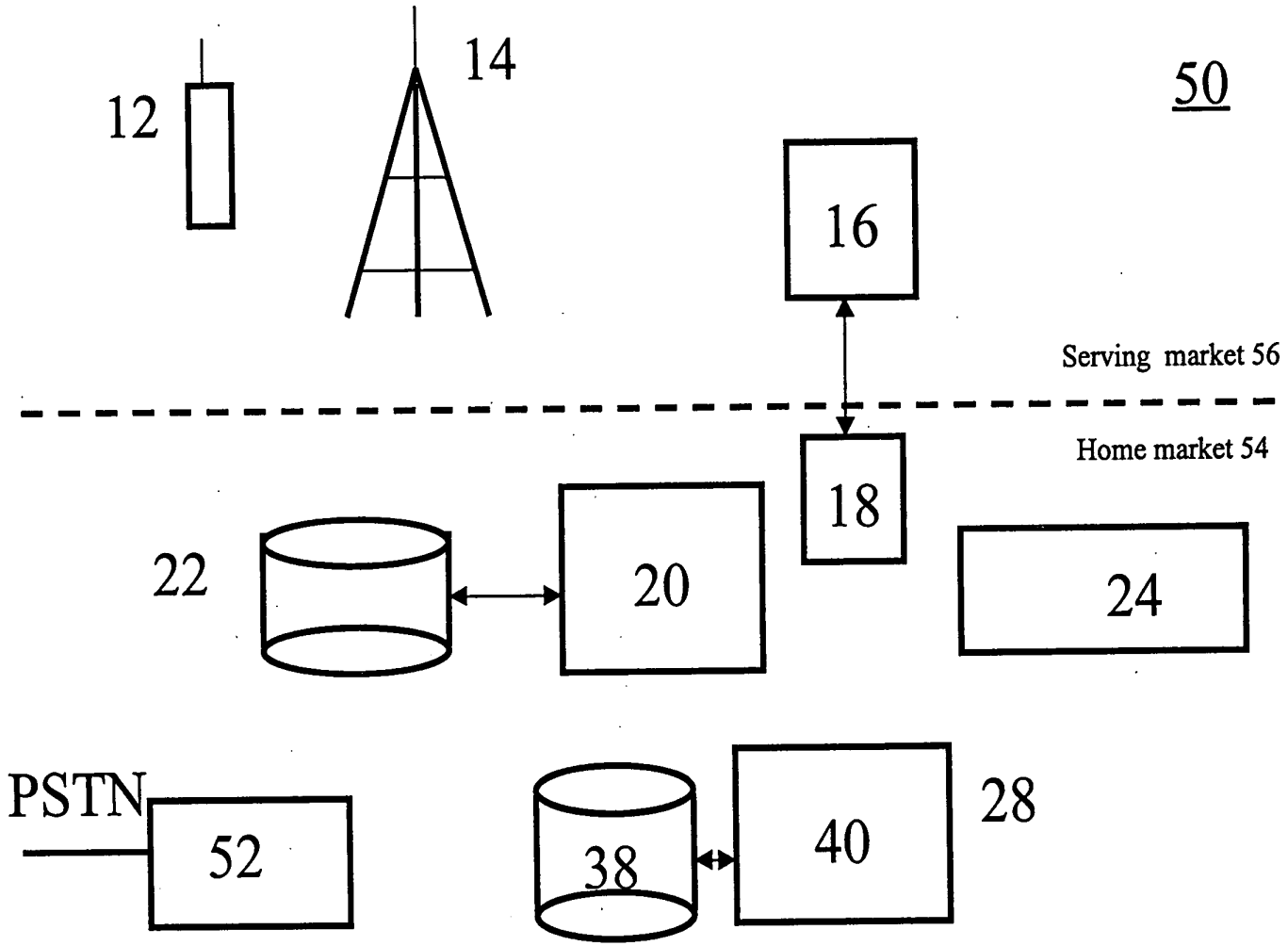
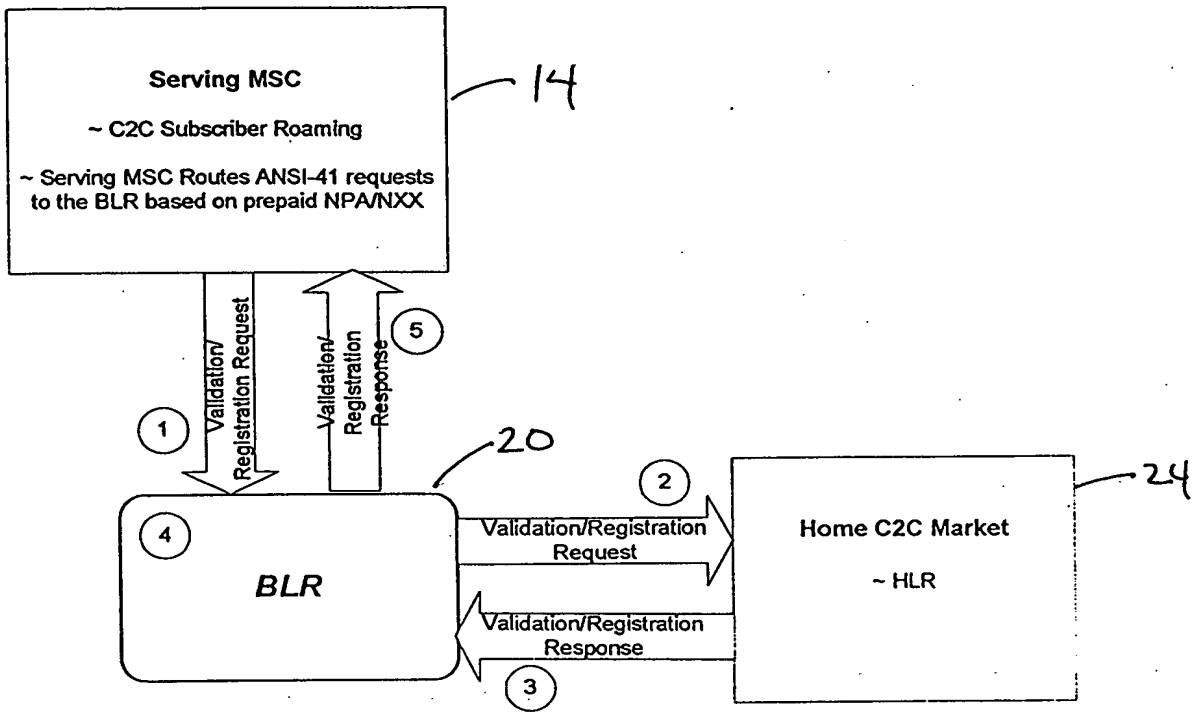

12
14
50
16
Serving market 56
Home market 54
18
22
20
24
PSTN
52
38
40
28

Fig. 2

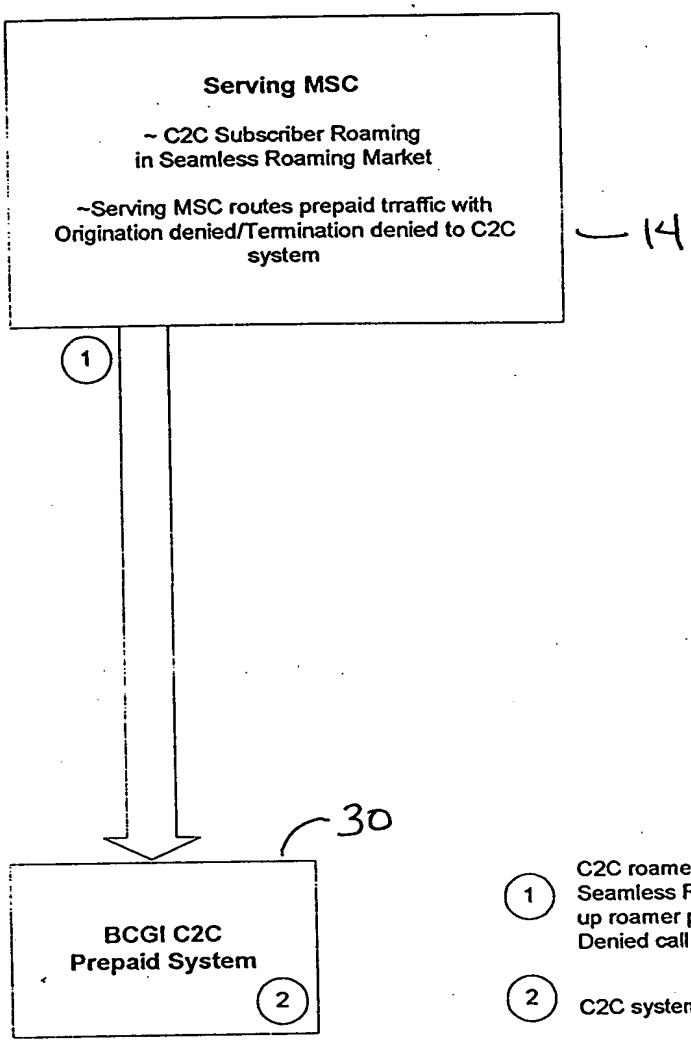
Roamer Registration and Verification Model



1. C2C roamer requests registration in serving MSC. Serving MSC requests caller's roaming profile from BLR based on prepaid NPA/NXX.
2. BLR requests caller's roaming profile from the HLR.
3. HLR returns roamer profile and then stores the subscriber's location.
4. The BLR will determine the Class of Market for the serving market. If it is a Hotline Romaing market, the BLR wil return "Origination via hotline# & term. denied" to the serving MSC. If it is a Seamless Roaming market, the BLR will return "Origination denied and Termination denied" to the serving MSC.
5. BLR returns roamer profile to serving MSC.

Fig 3

Roaming Call Origination Model (Seamless Roaming Market)

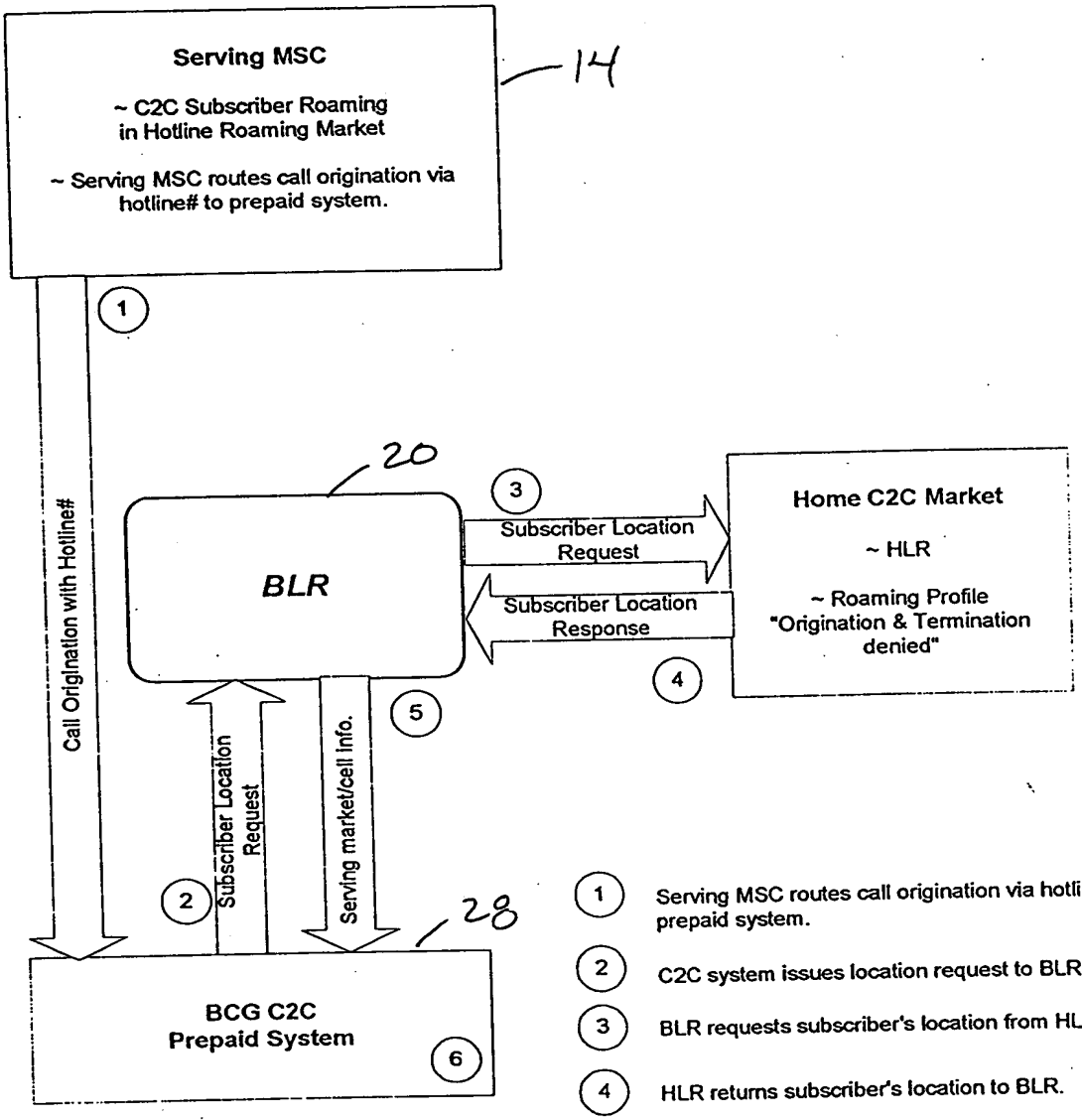


1. C2C roamer requests Call Origination in serving Seamless Roaming market. Serving MSC looks up roamer profile in VLR and sends Origination Denied call to prepaid voice node.

2. C2C system processes call.

Fig 4

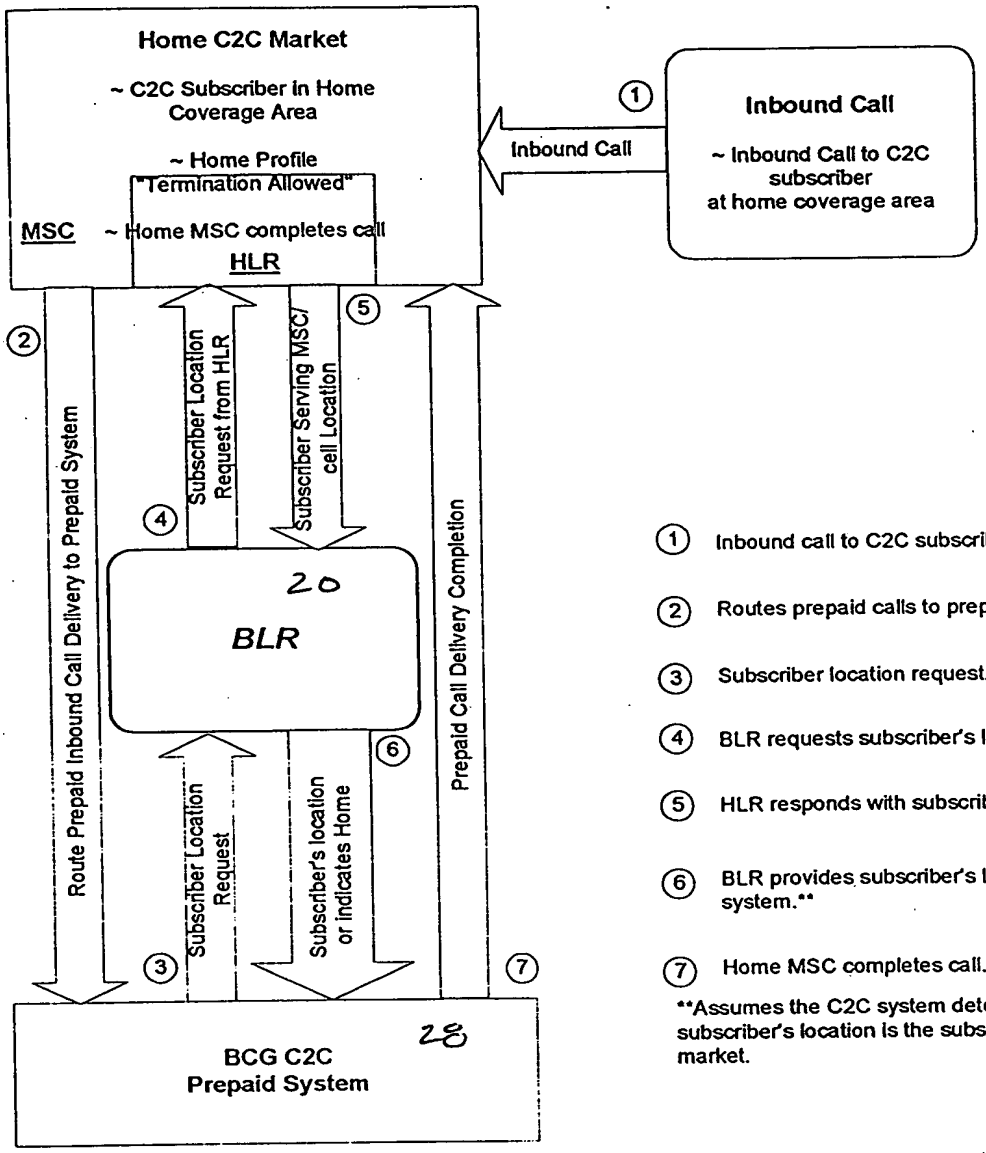
Roaming Call Origination Model (Hotline Roaming Market)



1. Serving MSC routes call origination via hotline# to prepaid system.
2. C2C system issues location request to BLR.
3. BLR requests subscriber's location from HLR*.
4. HLR returns subscriber's location to BLR.
5. BLR provides subscriber's location down to the cell and sector (if available) to the prepaid system for rating.
6. C2C system processes call.

* Assuming the HLR stores the subscriber's location wirth Term. Denied; if not, then the BLR will need to store the subscriber's location.

Fig 5

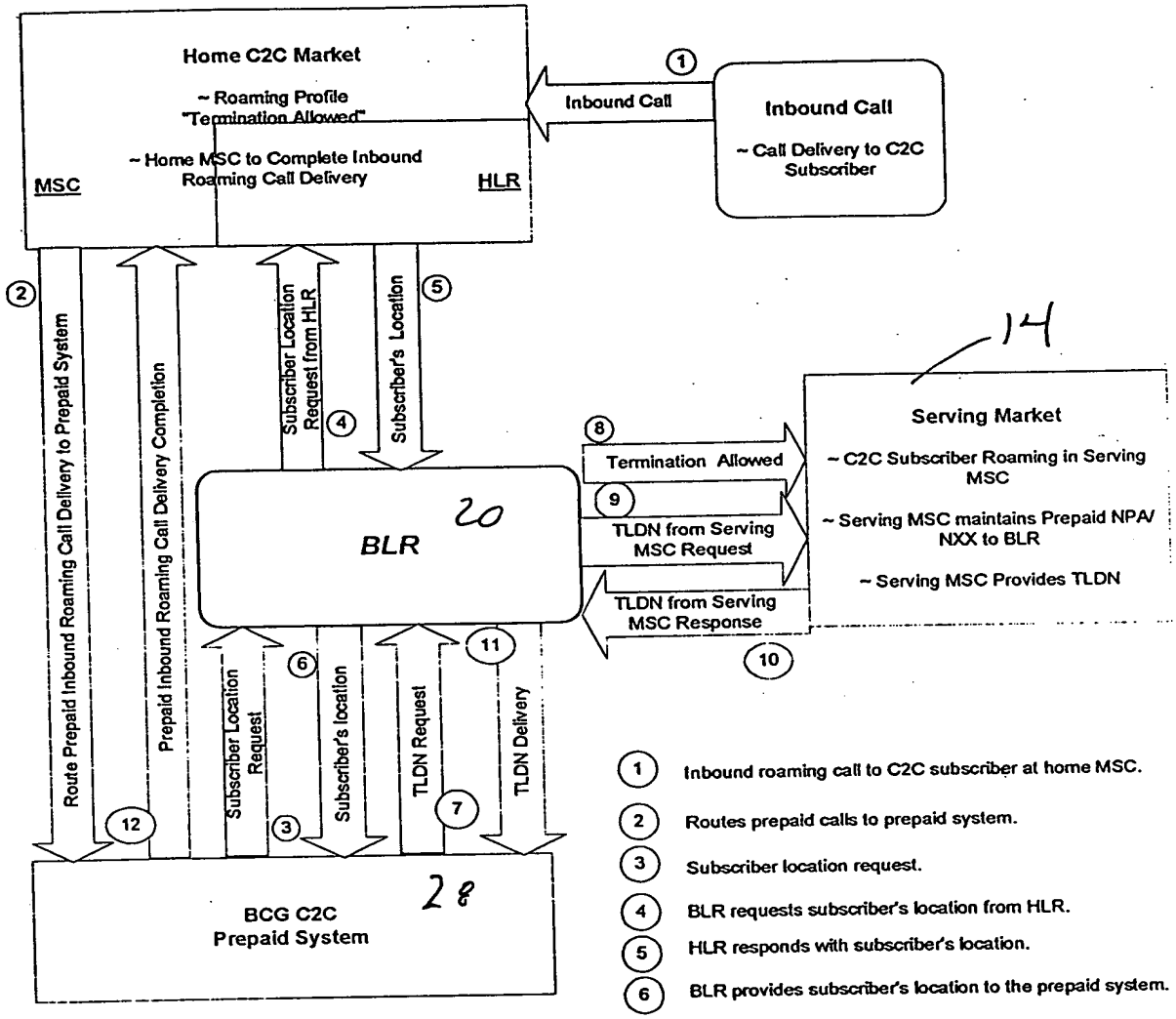


1. Inbound call to C2C subscriber at home MSC.
2. Routes prepaid calls to prepaid system.
3. Subscriber location request.
4. BLR requests subscriber's location from HLR.
5. HLR responds with subscriber's location.
6. BLR provides subscriber's location to the prepaid system.**
7. Home MSC completes call.

**Assumes the C2C system determines that the subscriber's location is the subscriber's home market.

Fig 6

Roaming Call Delivery Model



***Assumes C2C system determines that subscriber's location is not subscriber's home market.
**** Assumes Term. Allowed for One Call is possible.
***** Assumes serving MSC will return a TLDN if Term. Denied in roamer profile. .

1. Inbound roaming call to C2C subscriber at home MSC.
2. Routes prepaid calls to prepaid system.
3. Subscriber location request.
4. BLR requests subscriber's location from HLR.
5. HLR responds with subscriber's location.
6. BLR provides subscriber's location to the prepaid system.
7. Prepaid system requests TLDN.***
8. BLR sets "Termination Allowed" in roaming profile for the duration of one call.****
9. BLR obtains TLDN from VLR.
10. VLR returns TLDN to BLR.*****
11. BLR delivers TLDN to prepaid system.
12. Home MSC completes call and rates call accordingly.

Fig 7